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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/045,625

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Yeshik Shin

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EXAMINER

NGUYEN, STEVEN H D

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/045,625	Applicant(s) SHIN ET AL.	
	Examiner Steven Nguyen	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Reopening of Prosecution after the Board Decision

The prosecution of this case is being reopened after the Board decision reversing the examiner.

According to MPEP 1214.04:

If the examiner has specific knowledge of the existence of a particular reference or references which indicate nonpatentability of any of the appealed claims as to which the examiner was reversed, he or she should submit the matter to the Technology Center (TC) Director for authorization to reopen prosecution under 37 CFR 1.198 for the purpose of entering the new rejection. See MPEP § 1002.02(c) and MPEP § 1214.07.

1. In this case, Examiner is now aware of a reference (Austin – US 6498568) that teaches the limitation that the Board found lacking in the Burnett patent and on which the reversal of the Examiner was based.
2. The TC Director has approved this action reopening prosecution.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-9, 12-16, 19-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Burnett (USP 5703875) in view of Austin (USP 6498568).

As claims 1 and 16, Burnet discloses a method and a communication device for transmitting packet types of packets comprising the steps of receiving a packet having symbols, identifying a packet type of the packet based on the received packet and transmitting a control

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word that corresponds to the identified packet type (Col. 2, lines 55-60, the packet is received by port which identifies a type of packet of the received packet and forwarding a control word which corresponds to the identified packet type, Col. 2, lines 45-47); and transmitting the symbols of the received packet (Col. 2, lines 45-47, each type of message is associated with a different state control word and the state control word is transmitted before transmitting its associated message). However, Burnet does not disclose that the control word is used for synchronization in addition to indicating a packet type. In the same fields of endeavor, Austin discloses a protocol which uses a synchronization word for synchronizing and identifying a packet type wherein each synchronization word corresponds to a packet type (Col. 4, lines 37-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a synchronization word for identifying a packet type as disclosed by Austin into the teaching of Burnet which discloses a control word for identifying the packet type. The motivation would have been to reduce overhead to maintain a throughput after modifying the system.

As claims 4 and 19, Burnet discloses the control word is transmitted before transmitting the symbols of the packet (Col. 2, lines 45-47).

As claims 5 and 20, Burnet discloses the packet has a header with a field that indicates packet type (Col. 2, lines 57-60 a header with message type) and the identifying of the packet type includes checking the field of the header that indicates packet type (Col. 2, lines 57-60, the message type used to identify a type of packet).

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As claims 6 and 21, Burnet discloses the packet types include a data packet (Fig 2, Ref 13).

As claims 7 and 22, Burnet discloses the packet types include a control packet (Fig 2, Ref 12).

As claims 8 and 23, Burnett discloses the symbols are transmitted to a switch network (Col. 2, lines 45-49).

As claim 9, Burnet discloses a method for identifying packet types of packets of symbols comprising receiving a control word indicating a packet type (Col. 2, lines 45-47), each packet type having a different control word (Col. 2, lines 40-49); receiving a packet of symbols (Col. 2, lines 45-49, the second switch receives the message); and indicating that the received packet of symbols has the packet type of the received control word (Col. 2, lines 45-49, the state control word is used to stored the data or control packet into correct buffer). However, Burnet does not disclose that the state control word is used for synchronization and indication of packet type. In the same fields of endeavor, Austin discloses a protocol which uses a synchronization word for synchronizing and identifying a packet type wherein each synchronization word corresponds to a packet type (Col. 4, lines 37-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a synchronization word for identifying a packet type as disclosed by Austin into the teaching of Burnet which discloses a control word for identifying the packet type. The motivation would have been to reduce overhead to maintain a throughput after modifying the system.

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As claim 12, Burnet discloses the control word is received before the symbols of the packet are received (Col. 2, lines 45-49).

As claim 13, Burnet discloses packet types include a data packet (Fig 2, Ref 13).

As claim 14, Burnet discloses packet types include a control packet (Fig 2, Ref 12).

As claim 15, Burnet discloses the symbols are received from a switch (Fig 1).

5. Claims 2-3, 10-11 and 17-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Burnett and Austin as applied to claims 1, 9 and 16 above, and further in view of Thomas (US 4924463).

As claims 2-3, 10-11 and 17-18, Burnett and Austin fail to disclose the symbols of the packet include in-band symbols which are transition optimized and the synchronization symbols which are not are transition optimized, are out-of-band symbols. In the same field of endeavor, Thomas discloses the symbols of the packet include in-band symbols which are transition optimized, and the synchronization symbols which are not transition optimized are out-of-band symbols (Col. 5, lines 6-9, the synchronization symbols are not transition optimized because it is outside of the packet and in-band symbols are transition optimized because it is inside packet **as disclosed in the applicant spec, page 7, Sec 88**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply the teaching of Thomas to the method/device taught by Burnett and Austin such that in-band symbols which are transition optimized are used to encode data and out of band symbol which are not transition optimized are used to transmit synchronization symbols outside of the packet as disclosed by Thomas. The motivation would have been to improve data encoding.

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6. Claim 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Burnett and Austin as applied to claim 16 above, and further in view of Heil (USP 6944152).

As claim 24, Burnett and Austin fail to disclose the communications device is part of a storage area network. In the same field of endeavor, Heil shows that communications devices forming a storage area network are well known in the art (Fig 3 show a storage area network or SAN comprising multiple devices such as Host Devices 114 and switches comprised in Network 116. Col. 7, lines 17-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply the teaching of Burnett and Austin to devices of a storage area network such as those disclosed by Heil. The motivation would have been to increase the efficiency of the network by taking advantage of the overhead reduction resulting from using synchronization symbols to indicate packet types.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Nguyen whose telephone number is (571) 272-3159. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kizou Hassan can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

6/11/2009

/Steven Nguyen/

Primary Examiner, Art Unit 2419

/Timothy P Callahan/

Director, Technology Center 2400